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 20. A kit for DNA sequence analysis, the kit comprising one or more sets of oligonucleotide probes wherein (i) each probe set contains at least 50 different-sequence, single-stranded oligonucleotides, (ii) the oligonucleotides have lengths up to 12 nucleotides, and (iii) in each set, the different-sequence, single-stranded oligonucleotides within that set have substantially the same free energy of duplex formation.

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 21. The kit of claim 20 wherein each set contains from 50 to 10,000 different different-sequence, single-stranded oligonucleotides.

22. The kit of claim 20 wherein, for at least one said set, the different-sequence, single stranded oligonucleotides in that set have annealing temperatures whose maximum and minimum values differ from each other by no more than 1°C.

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 23. The kit of claim 22 wherein said annealing temperatures have a value from 22°C to 70°C.

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 24. The kit of claim 23 wherein said different-sequence, single-stranded oligonucleotides have lengths of 8, 9, or 12 nucleotides.

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 25. The kit of claim 22 which further includes an initializing oligonucleotide having a length of from 20 to 30 nucleotides, for binding to a target nucleic acid.

26. A kit for DNA sequence analysis, the kit comprising one or more sets of oligonucleotide probes wherein (i) each probe set contains 50 to 10,000 different-sequence, single-stranded oligonucleotides, (ii) the oligonucleotides are 8 to 12

nucleotides in length, and (iii) in each set, the different-sequence, single-stranded oligonucleotides within that set are from the same stringency class.

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27. The kit of claim 26, further including one or more initializing oligonucleotides and one or more solid phase supports having templates attached thereto, the templates each comprising a target polynucleotide having a binding region capable of forming a perfectly matched duplex with one or more of the initializing oligonucleotides.

28. The kit of claim 26 wherein each probe set contains 50 to 500 different-sequence, single-stranded oligonucleotides.

29. The kit of claim 28 wherein each stringency class is defined by a selected range of annealing temperatures.

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30. The kit of claim 29 wherein at least one selected range of annealing temperatures spans defines a 1°C interval.

31. The kit of claim 30 wherein each of said probes has a length of 8, 9, or 12 nucleotides.--

Abstract

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Attached is a separate page (page 32) containing an Abstract for the subject matter of claims 20-31.